

Via Facsimile, Sep. 6, 2004
 Commissioner for Patents
 App. No. 09/760,063
 Page 3 of 9

REMARKS

Claims 1-36 were pending in this application as of the Examiner's Office Action to which this Amendment is responsive. Claims 1-36 are rejected.

The below remarks are organized according to the section headings of the Examiner's Detailed Action of May 13, 2004.

Table of Contents to Remarks

1. Abstract.....	3
2. Trademarks.....	3
3. Appendix.....	3
4. Information Disclosure Statement.....	4
5. Claim Interpretation.....	4
6. Claim Rejections - 35 U.S.C. § 101.....	4
7. Claim Rejections - 35 U.S.C. § 112 ¶ 1.....	5
8. Claim Rejections - 35 U.S.C. § 112 ¶ 2.....	6
9. Claim Rejections - 35 U.S.C. § 102.....	7
10. Claim Rejections - 35 U.S.C. § 103.....	8
11. Summary.....	8

1. Abstract

Applicants have changed the Abstract such that the term "DUT" is spelled out.

2. Trademarks

Search of public Trademark database, at www.USPTO.gov, indicates the terms "CoverBooster," "Fortran" and "Pascal" are not trademarks. However, if the Examiner can present evidence of trademark status, applicants will capitalize these terms.

Even assuming the terms "UNIX," "C" and "C++" are trademarks, applicants believe they have already used the terms in accordance with MPEP 608.01(v) ("Trademarks and Names Used in Trade"). Specifically, applicants have capitalized the terms and applicants have provided generic terminology. For generic description of the terms, applicants refer the Examiner to page 20, lines 4-9 (re "UNIX") and page 32, lines 5-6 (re "C" and "C++").

3. Appendix

On July 19, 2004, attorney for applicants had a telephonic conversation with the Examiner. Attorney for applicants explained that, based upon a discussion with the

Via Facsimile, Sep. 6, 2004
Commissioner for Patents
App. No. 09/760,063
Page 4 of 9

Office of Patent Legal Administration, the Office is likely to soon supplement its regulations regarding compact disc submissions to permit PDF format files.

On the basis of such discussion, the Examiner agreed to hold in abeyance, until the next Office Action, the requirement that Appendices 1 and 2 be submitted on compact disc.

The Examiner requested that attorney for applicants include the substance of the telephonic discussion in the Remarks of the Amendment.

4. Information Disclosure Statement

This section requires no response from the applicants.

5. Claim Interpretation

Regarding the examiner's statement that "[t]he examiner interprets formal simulation as symbolic simulation," applicants refer the examiner to page 4, lines 1-2, where the specification states that symbolic simulation is an example of formal simulation.

Regarding the Examiners statement that the Examiner interprets "the interleaving or combination of symbolic and formal to be same for one particular test/execution," applicants are unclear as to what this statement by the Examiner means. **Applicants respectfully request a clarification of this statement by the Examiner.** Applicants note, for example, that claim 2 uses the word "same" while claim 1 includes no such limitation. Applicants would object to, for example, importing into claim 1 the limitations of claim 2.

6. Claim Rejections - 35 U.S.C. § 101

The Examiner has rejected claims 1-36 because the Examiner states that such claims are not directed to a useful, concrete or tangible result.

Applicants respectfully direct the Examiner's attention to the fact that all the claims are about "verifying a design for a microcircuit" -- an application whose utility is well known.

The Examiner asserts the claimed invention does not recite a "concrete" result without providing any explanation. Examiner's Action, page 5, line 2. According to the standard for a lack of concreteness rejection, presented by the Examiner in the last paragraph of page 4 of the Action, "[a]n appropriate rejection under 35 U.S.C. § 101 should be accompanied by a lack of enablement rejection." Applicants respectfully point out that enablement is not presented in the Examiner's Action as a basis of rejection. Therefore, since a lack of concreteness rejection has not been properly presented in the present Action, applicants will not address this issue.

Via Facsimile, Sep. 6, 2004
Commissioner for Patents
App. No. 09/760,063
Page 5 of 9

The standard for a tangible result, presented by the Examiner in the second-to-last paragraph of page 4 of the Action, is "whether there is simply a mathematical construct claimed, such as a disembodied data structure and method of making it." The claims present tangible procedures, apparatus or computer program product for accomplishing microcircuit design verification. For example, the course of action of the claimed simulation depends upon a "simulation coverage progress metric" and a "formal coverage progress metric."

Applicants further note MPEP § 2106 IV B 1 states the following:

If the invention as set forth in the written description is statutory, but the claims define subject matter that is not, the deficiency can be corrected by an appropriate amendment of the claims. In such a case, Office personnel should reject the claims drawn to nonstatutory subject matter under 35 U.S.C. 101, but identify the features of the invention that would render the claimed subject matter statutory if recited in the claim.

Therefore, should the Examiner still regard the claims as unsatisfactory, for purposes of § 101, applicants respectfully request that the Examiner "identify the features of the invention that would render the claimed subject matter statutory if recited in the claim."

7. Claim Rejections - 35 U.S.C. § 112 ¶ 1

As stated in MPEP 2163 ("Guidelines for the Examination of Patent Applications Under the 35 U.S.C. 112, para. 1, 'Written Description' Requirement") I ("GENERAL PRINCIPLES GOVERNING COMPLIANCE WITH THE 'WRITTEN DESCRIPTION' REQUIREMENT FOR APPLICATIONS") A ("Original Claims"):

There is a strong presumption that an adequate written description of the claimed invention is present when the application is filed. *In re Wertheim*, 541 F.2d 257, 263, 191 USPQ 90, 97 (CCPA 1976) ("we are of the opinion that the PTO has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims"). However, as discussed in paragraph I., *supra*, the issue of a lack of adequate written description may arise even for an original claim when an aspect of the claimed invention has not been described with sufficient particularity such that one skilled in the art would recognize that the applicant had possession of the claimed invention. The claimed invention as a whole may not be adequately

Via Facsimile, Sep. 6, 2004
Commissioner for Patents
App. No. 09/760,063
Page 6 of 9

described if the claims require an essential or critical feature which is not adequately described in the specification and which is not conventional in the art or known to one of ordinary skill in the art.

The Examiner's written description rejection is based upon the following statement:

The specification does not clearly define "a goal state", "progress metric" and "previously-defined goal states"; or their criteria.

In keeping with MPEP 2163 I A, the Examiner's basis for the written description rejection can only be maintained if the terms listed by the Examiner are "not adequately described in the specification" or are "not conventional in the art or known to one of ordinary skill in the art."

Applicants respectfully submit that the terms listed by the Examiner are adequately described in the specification, and refer the Examiner to the following portions.

With regard to the term "goal state," applicants refer the Examiner to at least the following portion of the specification: page 3, lines 5-15.

With regard to the term "progress metric," applicants refer the Examiner to at least the following portion of the specification discussing simulation progress metrics: page 12, line 8 to page 13, line 19. Applicants also refer the Examiner to at least the following portions of the specification discussing formal progress metrics: page 16, line 15 to page 17, line 4; page 18, lines 5-14 and page 40, line 17 to page 41, line 9.

With regard to the term "previously-defined goal states," since the term "goal state" state is defined in the specification, at such locations as indicated above, "previously-defined" simply adds an adjective to the term. An example use of the term "previously-defined goal states" can be found in the specification in the paragraph of page 4, line 19 to page 5, line 2.

8. Claim Rejections - 35 U.S.C. § 112 ¶ 2

The Examiner has rejected certain claims for being indefinite. In particular, claims 1-35 are rejected because the term "progress metric" is "ambiguous." Claims 4, 5, 12, 13, 20, 21, 28 and 29 are rejected because the term "satisfiability technique" is "vague and indefinite." Claims 7, 15, 23 and 32 are rejected because the terms "previously-defined sets" and "unreachable" are "vague and ambiguous."

MPEP 2173 ("Claims Must Particularly Point Out and Distinctly Claim the Invention") .02 ("Clarity and Precision") states:

The test for definiteness under 35 U.S.C. 112, second paragraph is whether "those skilled in the art would

Via Facsimile, Sep. 6, 2004
Commissioner for Patents
App. No. 09/760,063
Page 7 of 9

understand what is claimed when the claim is read in light of the specification." *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576, 1 USPQ2d 1081, 1088 (Fed. Cir. 1986).

With regard to the term "progress metric," since the applicants have already identified above, with respect to the Examiner's written description rejections, several portions of the specification that do make the term clear to one skilled in the art, applicants respectfully submit that the Examiner's rejections for indefiniteness are traversed as well.

With regard to the term "satisfiability technique," it is identified as a type of formal method in the specification at such locations as page 5, lines 3-4 and page 22, lines 12-15. Satisfiability (or "SAT") techniques are discussed at length in the specification at such locations as: page 17, line 5 to page 19, line 1. A bibliography of SAT techniques is presented in the specification from page 14, line 19 to page 15, line 5. Based upon such information in the specification, applicants respectfully submit that anyone of ordinary skill in the art would readily appreciate the meaning of the term "satisfiability technique."

With regard to the term "previously-defined sets," the claims referenced by the Examiner (claims 7, 15, 23 and 32) contain the term "previously-defined goal states" that has already been addressed above with respect to the Examiner's written description rejections. For at least the same reasons stated by applicants above, with respect to the Examiner's written description rejections, those skilled in the art would understand what is claimed by this term for purposes of definiteness.

With regard to the term "unreachable," it is discussed in the specification at such locations as page 22, line 16 to page 23, line 12. Based upon such information in the specification, applicants respectfully submit that anyone of ordinary skill in the art would readily appreciate the meaning of the term "unreachable."

Applicants note that MPEP 2173.02 states: "an analysis as to why the phrase(s) used in the claim is 'vague and indefinite' should be included in the Office Action." Applicants respectfully submit, however, that the Office Action dated May 13, 2004 presents conclusions of the Examiner and not the analyses that led to such conclusions. If the Examiner continues to conclude any term is indefinite, applicants respectfully request the Examiner include the analysis, leading to such conclusion, as called for by the MPEP.

9. Claim Rejections - 35 U.S.C. § 102

Applicants respectfully submit the Ho et al. reference, cited by the Examiner on a PTO-892 form included with the May 13, 2004 Office Action, is Appendix 3 of the present application of applicants and not prior art.

Applicants have made no suggestion Appendix 3 is prior art, since Appendix 3 is

Via Facsimile, Sep. 6, 2004
Commissioner for Patents
App. No. 09/760,063
Page 8 of 9

included in the specification under the section "Brief Description of the Printed Appendices" that immediately follows "Brief Description of the Drawings." Further, Ho et al., as cited by the Examiner, has a publication date of 11/09/00, while the present application has a filing date of 01/12/01.

Since the Examiner has not presented prior art as a basis for the § 102 rejections, applicants respectfully traverse such rejections.

10. Claim Rejections - 35 U.S.C. § 103

Applicants respectfully submit the Harer reference, cited by the Examiner on a PTO-892 form included with the May 13, 2004 Office Action, is Appendix 1 of the present application of applicants and not prior art.

Applicants have made no suggestion Appendix 1 is prior art, since Appendix 1 is included in the specification under the section "Brief Description of the Printed Appendices" that immediately follows "Brief Description of the Drawings." Further, the Examiner seems to be asserting a "publication" date of 02/14/00 for the Harer reference only on the basis of Appendix 1 bearing a date of 02/14/00. However, the Examiner points to no evidence that such date is a publication date.

Since the Examiner has not presented prior art as a basis for the § 103 rejections (i.e., neither Ho et al. nor Harer are prior art), applicants respectfully traverse such rejections.

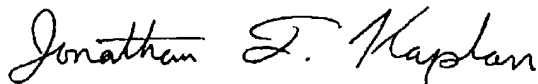
11. Summary

Applicants respectfully submit all objections, rejections and requirements, not held in abeyance, have been fully responded to and request an appropriate Action.

The U.S. Patent and Trademark Office is authorized to charge any fee deficiency, or credit any overpayment, to Deposit Account No. 502584 referencing docket number 06816.0173.

Via Facsimile, Sep. 6, 2004
Commissioner for Patents
App. No. 09/760,063
Page 9 of 9

Respectfully submitted,



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